

Donald Tom  
Bull Moose Tube Co.  
29851 County Road 20 West  
Elkhart, IN 46517

Re: Registered Construction and Operation Status,  
039-11688-00251

Dear Mr. Tom:

The application from Bull Moose Tube Co., received on December 21, 1999, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following tube forming and welding operation, to be located at 29851 County Road 20 West, Elkhart, Indiana, is classified as registered:

- (a) One (1) tube forming operation with mill coolant, identified as Mill #9, with throughput of 21.5 tons of steel tubes per hour;
- (b) One (1) tube forming operation with mill coolant, identified as Mill #4, with throughput of 12.86 tons of steel tubes per hour;
- (c) Thirty two (32) natural gas fired space heaters rated at 0.1 MMBtu/hr, nine (9) natural gas fired heaters rated at 0.15 MMBtu/hr;
- (d) One (1) band saw;
- (e) Two (2) high frequency Thermatool welders;
- (f) Surface coating process of 34.36 tons of steel per hour, consisting of airless spray and air atomization spray using a closed box and spray hood as overspray control; and
- (g) Three (3) natural gas fired heaters exhausting inside the building rated at 2.2 MMBtu/hr, and two (2) natural gas fired heaters exhausting inside the building rated at 1.2 MMBtu/hr.

The following conditions shall be applicable:

- (1) 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(2) 326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2, Process Operations, the particulate matter (PM) from the Mill #4 shall be limited to 22.7 lbs/hr and Mill #9 shall be limited to 32.0 lbs/hr.

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The closed box and spray hood shall be used at all times the surface coating is in operation.

(3) Volatile Organic Compound (VOC) Limitation

Actual input of VOC to Mill #4 shall not exceed 15 pounds per day. Therefore, requirements of 326 IAC 8-2-9 will not apply.

(4) Record Keeping Requirements

To document compliance with Condition #3, the Permittee shall maintain records in accordance with (a) through (f) below. Records shall be maintained at the source for a minimum of three (3) years and shall be made available upon request. Records maintained for (a) through (f) shall be complete and sufficient to establish compliance with the VOC usage limits established in Operating Condition #3.

- (a) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
- (b) A log of the dates of use;
- (c) The volume weighted VOC content of the coatings used for each day;
- (d) The cleanup solvent usage for each day;
- (e) The total VOC usage for each day; and
- (f) The weight of VOCs emitted for each compliance period.

This registration is a revised registration covering the entire source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section  
Office of Air Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

DH

cc: File – Elkhart County  
Elkhart County Health Department  
Air Compliance – Greg Wingstrom  
Northern Regional Office  
Permit Tracking - Janet Mobley  
Technical Support and Modeling - Michele Boner  
Compliance Data Section - Karen Nowak

<b>Registration Annual Notification</b>
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This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

<b>Company Name:</b>	Bull Moose Tube Co.
<b>Address:</b>	29851 County Road 20 West
<b>City:</b>	Elkhart
<b>Authorized individual:</b>	
<b>Phone #:</b>	
<b>Registration #:</b>	039-11688-00251

I hereby certify that Bull Moose Tube Co. is still in operation and is in compliance with the requirements of Registration 039-11688-00251.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

**Indiana Department of Environmental Management  
Office of Air Management  
and  
Northern Regional Office**

**Technical Support Document (TSD) for a Registration**

**Source Background and Description**

**Source Name:** Bull Moose Tube Co., Inc.  
**Source Location:** 29851 County Road 20 West, Elkhart, IN  
**County:** Elkhart  
**SIC Code:** 3317  
**Operation Permit No.:** 039-11688-00251  
**Permit Reviewer:** D. Harper

The Office of Air Management (OAM) has reviewed a renewal application from Bull Moose Tube Co., Inc. relating to the construction and operation of the registered tube forming and welding operation.

**Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted existing emission units and pollution control devices:

- (a) One (1) tube forming operation with mill coolant, identified as Mill #9, with throughput of 21.5 tons of steel tubes per hour;
- (b) Thirty two (32) natural gas fired space heaters rated at 0.1 MMBtu/hr, nine (9) natural gas fired heaters rated at 0.15 MMBtu/hr;
- (c) One (1) band saw;
- (d) Two (2) high frequency Thermatool welders;
- (e) Surface coating process of 34.36 tons of steel per hour, consisting of airless spray and air atomization spray using a closed box and spray hood as overspray control;

The source also consists of the new emission units:

- (f) One (1) tube forming operation with mill coolant, identified as Mill #4, with throughput of 12.86 tons of steel tubes per hour; and
- (g) Three (3) natural gas fired heaters exhausting inside the building rated at 2.2 MMBtu/hr, and two (2) natural gas fired heaters exhausting inside the building rated at 1.2 MMBtu/hr.

**Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

R039-4391-00251 for source location at 29851 CR 20 West, Elkhart, IN issued on March 23,

1995.

All conditions from previous approvals were incorporated into this permit.

### Stack Summary

Stack ID	Capacity (MMBtu/hr)	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
H-1, H-2, H-24, H-25, H-31, H-32	0.1	30	0.33	70	300
H-3 to H-23, H-26 to H-30	0.1	18	0.33	70	300
H-33 to H-41	0.15	18	0.33	200	300

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the construction and operation be approved.

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 21, 1999.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations. (3 pages)

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.@

Pollutant	Potential To Emit (tons/year)
PM	13.78
PM-10	14.08
SO <sub>2</sub>	0.0
VOC	21.72
CO	4.9
NO <sub>x</sub>	5.9

The VOC PTE is less than 25 tons per year, but greater than or equal to ten (10) tons per year and the PM PTE is less than 25 tons per year, but greater than or equal to five (5) tons per year. Therefore, pursuant to 326 IAC 2-1, a registration is required. The source is not subject to 326 IAC 8.

## Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1998 OAM emission data from R039-4391-000251 and R039-4392-000209(Mill #4 only).

Pollutant	Actual Emissions (tons/year)
PM	0.24
PM-10	0.24
SO <sub>2</sub>	0.01
VOC	11.2
CO	0.42
NO <sub>x</sub>	1.99

## County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as maintenance attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Elkhart County has been classified as attainment or unclassifiable for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

## Source Status

This existing source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply. Pursuant to 326 IAC 2-1, the entire source is registered.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This existing source with the new emission units is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,  
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and  
(c) any combination of HAPs is less than 25 tons/year.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

### State Rule Applicability - Entire Source

#### 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### State Rule Applicability - Individual Facilities

#### 326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the Mill #4 and Mill #9 shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

$$\text{Mill \#4: } E = 4.10 (12.86)^{0.67}$$
$$E = 22.7 \text{ lbs/hr}$$

$$\text{Mill \#9: } E = 4.10 (21.5)^{0.67}$$
$$E = 32.0 \text{ lbs/hr}$$

The closed box and spray hood shall be used at all times the surface coating is in operation.

#### 326 IAC 8-2-9 (Surface coating emission limitations: miscellaneous metal coating operations)

The source will not be applicable to 326 IAC 8-2-9 because the source consists of two facilities, Mill #9 and Mill #4, of which Mill #9, having a date of construction in 1984, will not be applicable because it does not have potential emissions of 25 tons or greater per year of VOC and Mill #4, having a date of construction in 2000, will not be applicable because it does not have actual emissions of greater than 15 pounds of VOC per day. There are no 326 IAC 8 rules that apply to the mill coolant because potential emissions of VOC do not exceed 25 tons per year. There are no other 326 IAC 8 rules that apply.

### Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

This source will emit levels of air toxics less than those which constitute a major source according

to Section 112 of the 1990 Clean Air Act Amendments.

### **Conclusion**

The construction and operation of this tube forming and welding operation shall be subject to the conditions of the attached Registration 039-11688-00251.

**Appendix A: Emissions Calculations****Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****Company Name: Bull Moose Tube Co.****Address City IN Zip: 29851 CR 20 West, Elkhart, IN****CP: R039-11688-00251****Plt ID: 039-00251****Reviewer: D. Harper****Date: 01/24/00**Heat Input Capacity  
MMBtu/hrPotential Throughput  
MMCF/yr

13.4

117.4

Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	SO2 0.6	NOx 100.0 **see below	VOC 5.5	CO 84.0
Potential Emission in tons/yr	0.1	0.4	0.0	5.9	0.3	4.9

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

gasc99.wb3

updated 4/99



**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

These calculations are for Mill #4.

One (1) unit equals one (1) ton of steel tube.

**Company Name:** Bull Moose Tube Co.  
**Address City IN Zip:** 29851 CR 20 West, Elkhart, IN  
**CP:** 039-11688-00251  
**Pit ID:** 039-00251  
**Reviewer:** D. Harper  
**Date:** 1/25/00

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Lb VOC/gal solids	Transfer Efficiency
TSO-1 Black Ink	6.7	90.00%	0.0%	90.0%	0.0%	0.00%	0.00070	12.860	6.03	6.03	0.05	1.30	0.24	0.02	ERR	10%
TSO Ink Conditioner	6.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.00009	12.860	6.57	6.57	0.01	0.17	0.03	0.00	ERR	10%
Rust Preventative 4175	9.0	5.77%	0.0%	5.8%	0.0%	0.00%	0.02980	12.860	0.52	0.52	0.20	4.78	0.87	12.81	ERR	10%
Spray Paint Cans	7.5	75.20%	0.0%	75.2%	0.0%	0.00%	0.00170	12.860	5.64	5.64	0.12	2.96	0.54	0.16	ERR	10%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%

**State Potential Emissions for Surface Coating**

**0.38                      9.21                      1.68                      13.00**

Mill Coolant (Evaporation only)	8.9	57.66%	50.0%	7.7%	55.0%	0.00%	0.15600	12.860	1.51	0.68	1.37	32.82	5.99	0.00	ERR	100%
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**State Potential Emissions for Mill Coating**

**1.37                      32.82                      5.99                      0.00**

METHODOLOGY

**Add worst case coating to all solvents**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

These calculations are for Mill #9.

**Company Name:** Bull Moose Tube Co.  
**Address City IN Zip:** 29851 CR 20 West, Elkhart, IN  
**CP:** 039-11688-00251  
**Pit ID:** 039-00251  
**Reviewer:** D. Harper  
**Date:** 1/25/00

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
TSO-1 Black Ink	6.7	90.00%	0.0%	90.0%	0.0%	7.00%	0.00025	16.000	6.03	6.03	0.02	0.58	0.11	0.01	86.14	10%
TSO Ink Conditioner	6.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.00006	16.000	6.57	6.57	0.01	0.15	0.03	0.00	ERR	10%
Melcote Rust Preventative	6.8	90.00%	0.0%	90.0%	0.0%	5.00%	0.02500	0.574	6.12	6.12	0.09	2.11	0.38	0.04	122.40	10%
V. Straaten Rust Preventative	7.9	14.50%	0.0%	14.5%	0.0%	10.00%	0.02500	0.574	1.15	1.15	0.02	0.39	0.07	0.38	11.46	10%
Spray Paints	6.6	85.00%	0.0%	85.0%	0.0%	10.00%	0.00400	16.000	5.61	5.61	0.36	8.62	1.57	0.25	56.10	10%

**State Potential Emissions for Surface Coating**

**0.49      11.85      2.16      0.68**

Mill Coolant (Evaporation only)	8.9	57.70%	50.0%	7.7%	55.0%	45.00%	0.24200	16.000	1.52	0.69	2.65	63.68	11.62	0.00	1.52	100%
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**State Potential Emissions for Mill Coating**

**2.65      63.68      11.62      0.00**

METHODOLOGY

**Add worst case coating to all solvents**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)